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Published weekly for employees of Lawrence Livermore National Laboratory *Friday, June 21, 2002* *Vol. 27, No. 25*

FROM THE DIRECTOR'S OFFICE

Jan Tulk

New Lab policies provide more work schedule options

The employee survey taken last year clearly indicates that one of the things our employees want most is more flexibility in their work schedules. While the Lab has offered flexibility for many years, it has been inconsistently practiced due to misunderstandings of what our policies allowed.

In what represents the first major deliverable of the Survey Action Teams' recommendations endorsed by the Senior Management Council, the Lab has issued new Flexible Work Options Policies, effective this October. The new policies clearly identify the flexible options available and reflect Senior Management's encouragement to use flexible work schedules when consistent with business needs.

Although some employers have made 9/80 work schedules the standard for their workforce, our new policies provide greater flexibility for employees and managers. Flexibility doesn't just include a 9/80 work schedule, as some employees requested in the survey. Rather, it encompasses a suite of options, such as flextime — working non-standard hours within a particular schedule type, such as 7 a.m. to 3:30 p.m. with a half hour lunch in the typical eight-hour day, five-day

See **DIRECTOR'S OFFICE,** *page 8*

The Laboratory 'Then & Now'

By Stephanie Esposito
NEWSLINE STAFF WRITER

In honor of the Laboratory's 50th Anniversary each directorate is hosting various "Then & Now" events for employees and invited retirees throughout the week. The following is next week's schedule of events and activities.

Administration/Human Resources

The Administration and Human Resources Directorate will hold a picnic for its employees on Thursday, from 11:30 a.m. to 1:30 p.m. in

See **THEN & NOW,** *page 4*

Environmental impact of Lab projects and activities to be assessed by NNSA

The National Nuclear Security Administration has announced it will begin preparing a new site wide Environmental Impact Statement (EIS) for the Lab. The EIS is to be completed by late 2004 in accordance with the Council on Environmental Quality's National Environmental Policy Act.

The site-wide EIS examines every source of environmental impact from Lab projects. The last site-wide EIS was completed in 1992 and a supplemental analysis conducted in 1999. Many indi-

See **ENVIRONMENT,** *page 8*

Lab chemist awarded 2002 Seaborg Medal

By Anne M. Stark
NEWSLINE STAFF WRITER

Lab chemist Leonard Gray has something in common with renowned chemist, Nobel Laureate, former director of the Lawrence Berkeley Laboratory and former chairman of the Atomic Energy Commission, Glenn Seaborg.

And it's more than just a love of chemistry.

Recently Gray received a medal named after and first given to Seaborg in 1987.

Gray was awarded the prestigious 2002 Seaborg Medal earlier this month during the National Conference of the American Nuclear Society. The medal, awarded annually, was established in 1987 by the UCLA Department of Chemistry and Biochemistry to honor individuals for their significant contributions to chemistry and biochemistry.

"This recognition is really overwhelming," said Gray, who has worked at the Lab since 1989. "I am privileged to be recognized along the likes of someone as distinguished in science as Seaborg."

For Gray's part, he received the medal for "outstanding accomplishment and meritorious achievement in actinide separations sciences."

His research is considerable:

- Developed numerous chemical processes for the

See **MEDAL,** *page 4*

LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Monday 24

LLESA and the American Red Cross are sponsoring a **blood drive** from 8:30 a.m.-2:30 p.m. in Bldg. 415. The blood drive will continue Tuesday through Thursday, 7:30 a.m.-1:30 p.m. Appointments may be scheduled in advance at http://www.beadonor.com (company code: LLNL) or by calling the LLESA Office at 2-9402. Eligibility questions should be directed to the American Red Cross at 1-800-448-3543.

Tuesday 25

The **LLNL Retirees Travel Slide Group** will meet at 2 p.m. at the Livermore Library meeting room for a presentation on "Western Central Asia to the Caucasus: Uzbekistan, Tajikistan, Turkmenstan, Azerbaijan, Georgia and Armenia," by Stephen and Arlene Chin.

Wednesday 26

University Relations is hosting its annual **summer picnic** for staff, students and postdocs at noon in the LLESA picnic area. All students and postdocs on site are invited to attend. Cost is $5, which includes choice of hamburger, veggie burger, or hot dog, chips, drink, salad and dessert. Tickets must be purchased by today, June 21. Contacts: Joanna Allen, 2-0620; Bobbi Houston, 2-0394; Marry Ann Soby, 3-1102; or Davien Lundin, 2-5640.

Thursday 27

Summer students who took the practice **GRE exam** on June 18 can receive **feedback** from 6-8 p.m. in the Bldg. 361 auditorium. For more information about this event, go to http://education.llnl.gov/sbb or contact Barry Goldman, 2-5177.

Up & Coming

David Seaborg, son of Nobel Prize winner Glenn T. Seaborg, will discuss **Nobel Pursuits: Personal Views of the Nobel Prize** at the Blackhawk Museum in Danville on Wednesday, July 25 at 7:30 p.m. The talk will focus on Seaborg's experience as the son of a Nobel Laureate. For more information, call (925) 736-2277.

Lab TV Broadcast Schedule

"Straight From the Heart" will be broadcast on Lab Channel 7 from noon-12:30 p.m. beginning Monday and continuing through June 28. The film is being shown as part of the Lesbian, Gay, Bisexual and Transgender Association's celebration of Gay Pride month.

Coleman talk kicks off 2002 AALS

As the African American Lecture Series (AALS) enters its second year, organizers are beginning the summer with a talk by Lab employee Sabre Coleman.

Sabre Coleman

Coleman is an environmental engineer in the Environmental Restoration Division of the Environmental Protection Department. Her talk, which will take place Tuesday at 10 a.m. in the Bldg. 361 Auditorium, is entitled "A Study of the Use of Hydrophobic Silica Aerogel and Granular Activated Carbon Composite for the Removal of Uranium from Ground Water." An LDRD project, the study was a part of the effort to clean up groundwater contaminants at the Lab and Site 300. Coleman and her team members have applied for a patent for their work.

A former leader of the Pollution Prevention and Tank Assessment groups, Coleman earned her bachelor's degree from Brown University and her master's degree from the University of Michigan in environmental and water resources engineering.

The AALS is jointly sponsored by the Chemistry and Materials Science Directorate and the Affirmative Action and Diversity Program. The series is designed to highlight the work and contributions of African-American scientists and engineers at LLNL.

"This is a great opportunity to showcase some of the work that African-American scientists are doing at the Lab," spokeswoman Tuijauna Mitchell-Hall said. "By presenting in the summer, we also hope to inspire some of our students with the accomplishments of the African-American community."

For more information about this talk or the AALS, contact Mitchell-Hall at 4-4469 or mitchellhall1@llnl.gov.

UTel: The new connection to on-site utilities

The Telecommunications and Site Utilities Department (TSUD) is pleased to announce its new name and logo: UTel "Your connection to on-site utilities."

The name was selected from more than 130 possibilities and represents the joining of Utilities and Telecommunications into a single organization. The logo was designed to represent the department's new identity.

"Our organization includes Telecommunications, Industrial Electronics/ Alarms, Electrical Utilities, and Mechanical Utilities which are all represented by the new name," said Carol Lamee, UTel service operations division leader.

The top name possibilities were tested with UTel employees and customers to determine the impact and feasibility of the change.

"We wanted a Department name that was different, would catch people's attention, and would be easy to remember," said Pat Dempsey, UTel department head. "We had some really open minded and creative people on our naming committee. Selecting a name that is not an acronym was pretty bold but I think it will serve its purpose well."

For more information about the new name or logo, please contact Amy Muller, UTel customer liaison, at 2-8727.

Conference volunteers needed for expanding your horizons

Volunteers are needed in the pre-planning efforts for the 10th Annual San Joaquin Expanding Your Horizons in Science and Mathematics Conference scheduled for Oct. 5 at the University of Pacific in Stockton.

This conference is one of more than 140 that are held around the country each year with the goal of encouraging young women in grades 6-12 to pursue careers in science and technology. At the conference, participants attend hands-on workshops and have the opportunity to meet men and women who work in diverse careers and can make an impact on the choices they make about their future.

Volunteers are needed in the following areas: finances, fund-raising, conference program, workshop presenters, publicity, and media. For more information about the conference or to volunteer, please go to: http://education.llnl.gov/eyh/ For questions please contact Cary Gellner at gellner1@llnl.gov or call 2-0643.

CORRECTION

In last week's *Newsline*, a story on the Regents Oversight Committee visit incorrectly listed AD George Miller as the presenter of an overview on national security. AD Bruce Goodwin gave the presentation.

Newsline

Newsline **is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.**

Contacts:

Managing editor: Lynda Seaver, 3-3103

Contributing writers: Don Johnston, 3-4902; Elizabeth Rajs, 4-5806; David Schwoegler, 2-6900; Anne Stark, 2-9799; Steve Wampler, 3-3107; Gordon Yano, 3-3117. For an extended list of Lab beats and contacts, see http://www.llnl.gov/llnl/ 06news/NewsMedia/contact.html

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1952 – 2002
MAKING HISTORY, MAKING A DIFFERENCE

Material that makes nuclear weapons safer

This is an ongoing feature highlighting the Lab's 50-year history. This week we take a look at the year 1976.

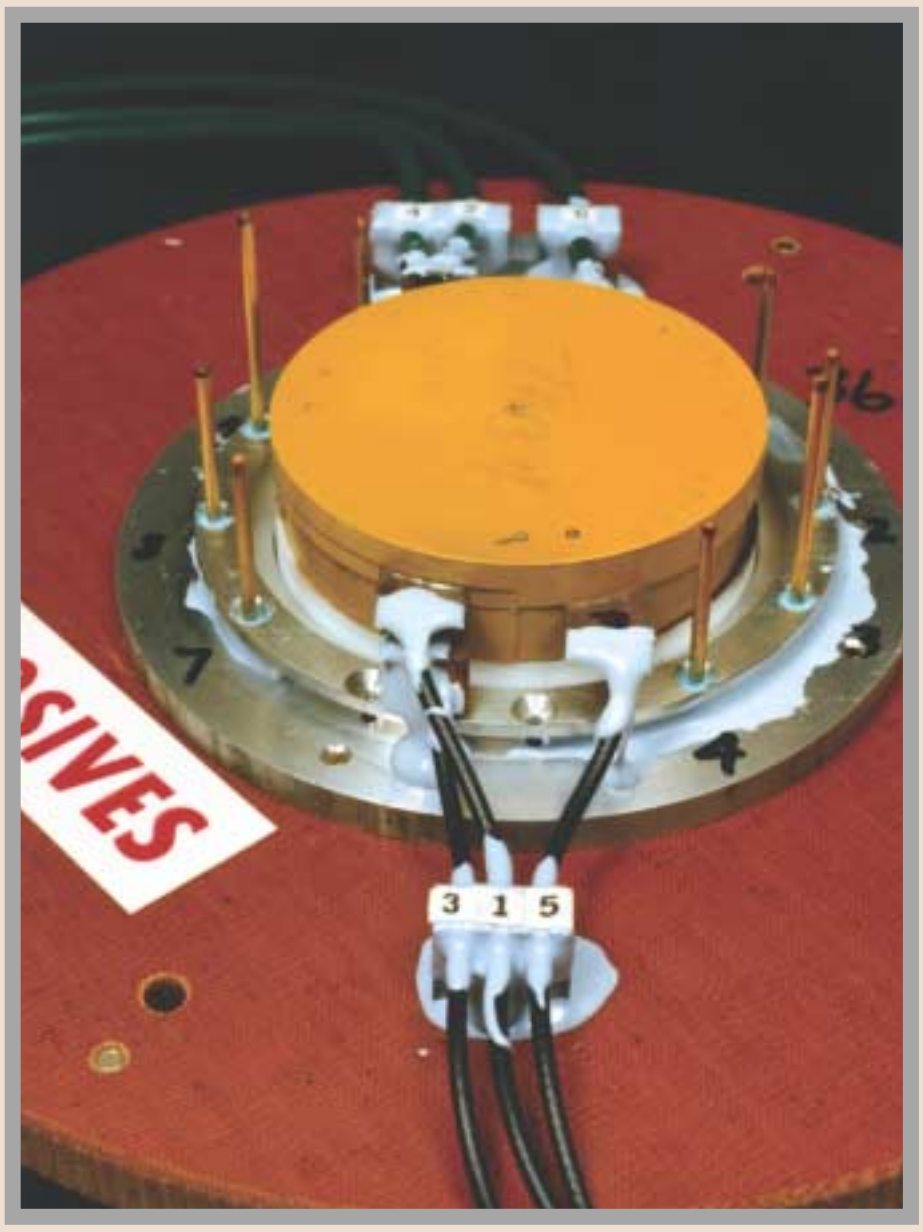
In 1975, Laboratory researchers published their first report on an insensitive high explosive, TATB (triamino-trinitrobenzene). Further work to characterize the material and find improved ways of producing it has led to widespread use of insensitive high explosives (IHE) in nuclear weapons. Use of IHE is one of the many important advances made over the past five decades to improve the safety and security of nuclear weapons.

TATB is virtually invulnerable to significant energy release in plane crashes, fires, explosions or to deliberate attack with small arms fire. In fact, TATB is so stable that one of the issues that researchers faced was how to reliably initiate an explosion of the material. Another significant issue was finding a ready and affordable way to produce TATB.

The first systems to include TATB were a variant of the B61 bomb, the W80 cruise missile warhead and the B83 strategic bomb. Livermore's W84 cruise missile warhead and W87 intercontinental ballistic missile warhead were the first designs to use TATB for the explosive detonators as well as for the main explosive charge, further enhancing safety. In the 1990s, Livermore researchers developed a more environmentally benign and lower-cost method for producing TATB, called vicarious nucleophilic substitution.

enhanced SAFETY

1976



Research on energetic materials at the Laboratory has led to the development, detailed characterization and use of extremely safe high-explosive materials for weapons.

Around the Lab

Lance Missile with Lab Warhead
In the mid-1970s the Lab was selected to modify the Lance Missile warhead, developed by the Lab 10 years previously. Little John was the third Lab-designed missile warhead.

Around the nation

- Peaceful Nuclear Explosions Treaty
- Carter elected president
- Stephen Wozniak and Steven Jobs found Apple Computer in a garage.

Around the world

- Chinese Premier Zhou Enlai dies of cancer and Central Committee Chairman Mao Zedong dies of Parkinson's disease, prompting violent power struggles in China

in other NEWS

Other news around the Lab, the nation and the world.

For more of the Lab's rich history, check out the Timeline, located at : http://www.llnl.gov/timeline/

AUG. 1ST, 2ND 2002

SCIENCE DAYS

Join Lab employees as they discuss the Lab's history and present the status of programs in the areas of bio defense, climate modeling, lasers and energy, astrophysics and more.

THEN & NOW

Continued from page 1

the pool area. Tickets are $4 each and can be purchased from Katie Didion, 3-3369, April Masluk, 2-0112, or Kathy Raymond, 3-9034.

HR will also be presenting various department displays throughout "Then & Now" week on the grass lawn between Bldgs. 481 and 482. The National Ignition Facility (NIF) will be the first directorate displayed today, Chemistry and Material Science will be on Tuesday, NAI on Thursday and Engineering on June 28.

For more information contact Susan Houghton, 2-9919.

Chief Financial Officer's Office

There will be an employee celebration and contribution to the Laboratory's Time Capsule on June 28 in Bldg. 314.

Contact Greg Bequette, 3-1221.

Chemistry and Materials Science

A CMS picnic will be held on Tuesday between Bldgs. 481-482; just look for the tent.

For more information contact Trish Baisden, 2-6661 or Pam Poco, 2-8006.

Defense and Nuclear Technologies

The Defense and Nuclear Technologies (DNT) Directorate will host a 3-day seminar series highlighting outstanding LLNL innovations in nuclear weapons research from Monday through Wednesday. Seminars will be held in various major conference rooms.

Contact Kent Johnson, 2-6584.

Director's Office

The University Relations Program (URP) is holding their annual summer picnic for URP staff and all lab postdocs and students on Wednesday in the LLESA picnic area from noon to 1 p.m. Tickets are $5 per person and must be purchased no later than today. Raffle tickets are available (must be present to win). There is limited parking near the pool area, so bikes and taxis are recommended. To RSVP contact, Joanna Allen, 2-0620, Bobbi Houston, 2-0394, Mary Ann Soby, 3-1102, or Davien Lundin, 2-5460.

For more information contact Lynda Yon, 4-6577.

Energy and Environment

EED will present a panel discussion with three former Energy Program leaders discussing the early development stages of energy programs during the Nixon-Carter era on Thursday in Bldg. 543 auditorium at 1:30 p.m. The panel is entitled, "The War for Independence from Oil." A poster session on recent energy research and refreshments will follow the panel.

For more information, contact Norm Burkhard, 2-6483.

Engineering

Engineering Day is being celebrated June 28 in Bldg. 123 auditorium for employees and retirees. Various activities, including a reception, picnic, panel, video and book release, also will be held on June 28, outside, between Bldgs. 481 and 482.

For more information contact Don Meeker, 2-5434 or Bev Hobson, 2-0151.

Laboratory Services

Laboratory Services will host a reception for retirees on Tuesday in the west lobby of Bldg. 551.

For more information, contact Suzzanne Cassel, 2-9229.

National Ignition Facility

"Team NIF" will host an open house today in Bldg. 123. The HR display on NIF will also be presented throughout the day between Bldgs. 481-482.

For more information contact Craig Wuest, 3-2909 or Donna Fortner, 2-4717.

Nonproliferation, Arms Control, and International Security

NAI will host a panel and picnic for NAI employees and retirees during Monday afternoon in Bldg. 123.

For more information contact Lauren de Vore, 2-0855.

Physics and Advanced Technologies

PAT will celebrate "Then & Now" week with a series of lectures Monday through June 28 in the Bldg. 543 auditorium. The first seminar, "Retrospective and Speculation on Magnetic Fusion Energy R&D at LLNL," presented by Bick Hooper, is from 1:30-3 p.m. Monday.

Other seminars include "Retrospective and Speculation on Inertial Confinement Fusion R&D at LLNL" with speaker John Lindl Tuesday, "Retrospective and Speculation on Astrophysics R&D at LLNL" with Claire Max Wednesday, and "Retrospective and Speculation on X-ray Laser R&D at LLNL" with Dennis Matthews on Thursday. All seminars except for Monday will be held from 10:30 a.m. to noon.

June 28 is PAT Luminaries Day, an all-day lecture series open to all lab employees. Among the guest speakers are former Directors Mike May and John Nuckolls, and Nobel Laureate Bob Laughlin, with presentations on "retrospectives and speculations" on everything from physics and fusion energy to nuclear arms control and global terrorist threats. The day runs from 9 a.m. to 6 p.m. Lunch is provided and a reception will be given at the end of the day.

For more information contact Ralph Jacobs, 4-4545.

Safety, Security and Environmental Protection

SSEP will celebrate "Then & Now" with a panel and guest speakers on Monday, 10:30 a.m.-noon in Bldg. 543 auditorium. Guests include four previous SSEP leaders; Max Biggs, Art Toy, Phil Schiedermayer and Harry Galles, along with Associate Director Den Fisher.

A number of posters representing the various departments also will be displayed in the lobby and auditorium during the celebration.

For more information contact Manny Lateiner, 3-6398.

MEDAL

Continued from page 1

recovery and purification of plutonium from fuels and reactor targets, specified by the DOE and its predecessor agencies, as non-processable. This prevented many hundreds of tons of reactor fuels from being added to the DOE legacy materials while adding hundreds of kilograms of plutonium to the weapons stockpile.

• Developed numerous chemical processes for the recovery and purification of plutonium from "hard-to-recover" plutonium scrap and residues. These flowsheets removed several hundreds of tons of plutonium scrap from the scrap backlog and returned the plutonium to the weapons stockpile. As a result, tons of residues were removed from the DOE list of materials without a disposition pathway.

• Developed process modifications that allowed the dissolution rate of plutonium metal to increase by a factor of four.

• Developed a process for the recovery and purification of 241 Am from plutonium metal that resulted in the recovery and purification of the purest 241Am ever shipped to the isotope sales pool at Oak Ridge National Laboratory.

• Developed flow sheets for the recovery and purification of 242Am/244Cm from various waste streams from the processing of various reactor targets.

Lab Chemist Leonard Gray, left, receives the 2002 Seaborg Medal earlier this month during the National Conference of the American Nuclear Society for his research in actinide separations science.

• Served as the primary technical investigator on the expert team invited by MINATOM to investigate the explosion within the uranium-plutonium separation plant at Tomsk-7, Russia.

• Recruited and led the international team of scientists and engineers that developed the ceramic immobilization form from the disposition of Excess Weapons Plutonium.

• Serves as the primary technical and only non-federal spokesperson for DOE at various public meetings on the Disposition of Excess Plutonium.

"These are achievements over the span of his career," said Lou Terminello, division leader of the Materials Science and Technology division of Chemistry and Materials Science. "The Laboratory is fortunate to have someone of such a high caliber working here."

Other Seaborg medalists include John McTague, UC vice president for Lab management in 1989, Mary Good, former president of the American Chemical Society in 1996, and Seaborg in 1987, the first year the medal was awarded.

"Len has helped save taxpayers money while helping to clean up the environment through his chemical separation work," said Hal Graboske, associate director for the Chemistry and Materials Science Directorate. "His work continues the tradition established by Seaborg, one of the giants of science. It represents an excellent contribution to the nation's interests by the Lab."

50 facts about 50 years of science excellence

Trivia BLAST from the past

A team of Lab scientists look over Gnome Drift in Carlsbad, NM, the site of the first Plowshare Program experiment in 1961. Pictured from right: Dr. Roger Batzel, the future director of Lawrence Livermore National Laboratory; Jerry Johnson (second from the right), the head of the Plowshare Program; former LLNL Director Edward Teller (third from the right); and George Cowan, from Los Alamos National Laboratory.

by Gary J. Hanson, Engineering

Now you can test your knowledge of the Lab's rich history as we enter into "Then & Now" Week (June 24-28) and the Lab's 50th Anniversary celebration. ***Answers are on page 6.***

1. What Laboratory Director had the shortest tenure as Director? What Laboratory Director had the longest tenure as Director?

2. How many current Laboratory employees were born in 1952? (As of January 1, 2002)

3. What was the name of the individual who sold the land to the U.S. government that is now the Laboratory?

4. How many people came to Livermore to form the Laboratory?

5. What single event triggered the establishment of the Laboratory?

6. The first large Laboratory computer was the LARC. What does LARC stand for?

7. You could sit on an overstuffed sofa in front of a fireplace in this original building.

8. Which Ph.D. experimental physicist worked at the Laboratory for $1/year?

9. This member of Royalty visited the Laboratory. Who was it? What year?

10. This building's number did not change when the new building numbering system was put into place.

11. The residents of Newark, Calif. experienced this when the ASTRON prototype was first fired up.

12. What was the auto repair facility located on East Avenue across from Bldg. 113 called?

13. What was the "Turtle Line"?

14. Why is the building located at the corner of Mesquite and Vasco Road called the "Sunshine Building"?

THEN & NOW
WEEK: JUNE 24-28 2002

15. What sitting President has visited the Laboratory?

16. Which former Laboratory Director and future U.S. Director of Defense Research and Engineering under President Kennedy climbed over the fence to retrieve his Laboratory badge one night?

17. Who was the only sitting First Lady to visit the Laboratory? What did she suggest changing?

18. What was the name of Vasco Road between East Avenue and the railroad tracks in 1952?

19. What was the original use for the Laboratory pool?

20. What was CR&D?

21. What year was the land purchased for Site 300?

22. What was the Laboratory's first underground shot named?

23. Who became the Laboratory's first business manager in September 1952?

24. How high were the tallest towers used for an NTS event?

25. Who visited the Laboratory and talked about the common cold?

26. Who was the Laboratory's first woman employee?

27. What U.S. Vice-President visited the Laboratory?

28. Navy pilots were trained at Livermore to fly what aircraft?

29. What was the original use of Bldg. 212?

30. Where was the Laboratory's final non-NTS nuclear event fielded? What was the purpose?

31. What nuclear weapon was tested in Alaska? What was the event name?

32. What is the source of the Laboratory's water supply?

33. What were the three types of aircraft used to transport Laboratory workers between Livermore and NTS?

34. What was Ernest Lawrence's middle name?

35. What was the purpose of the "Sedan" test?

36. How old was Harold Brown when he became Head of "A" Division?

37. What year was University of California Radiation Laboratory (UCRL) changed to Lawrence Radiation Laboratory (LRL)? What year was Lawrence Radiation Laboratory (LRL) changed to Lawrence Livermore Laboratory (LLL)? What year was Lawrence Livermore Laboratory (LLL) changed to Lawrence Livermore National Laboratory (LLNL)?

38. What was the Laboratory's original phone number?

39. How many current employees were born on September 2, 1952?

40. What were the Laboratory's early research efforts in the area of controlled thermonuclear reactions called?

41. What was the Laboratory's first computer called?

42. What world famous photographer once visited the Laboratory?

43. For what purpose was the top floor of Bldg. 415 used?

44. What is DRA facility used for at NTS?

45. Who was the Lab's first Director and how old was he?

46. In the early days of testing in the Pacific how did Laboratory people communicate with loved ones at home?

47. What building suffered the most damage as a result of the 1980 earthquake?

48. In what year was *Newsline* first published?

49. Prior to the implantation of 911 as the Laboratory's emergency telephone number, what was the Laboratory's emergency telephone number?

50. What year was the Laboratory's first family day?

See ANSWERS, page 6

NIF Makes History. . .

Channel, that is...

The History Channel's "Modern Marvels" series recently aired a program entitled, "World's Biggest Machines." The show includes a segment on the National Ignition Facility.

Producer Luke Ellis of Actuality Productions has provided a copy for Lab employees.

The program will air on Lab-TV Monday through Friday, July 8–12 at 10 a.m., 2 p.m. and 4 p.m. on Lab-TV Channel 7.

Classifieds ads to return next week to Newsline; available Monday on Web

Due to this week's special coverage of "Then & Now" Week, the classified ads are being held because of space limitations. The ads can be viewed on the Web at: https://www-ais.llnl.gov/newsline/ads/ The ads will return to *Newsline* next week.

continued from page 5

Trivia BLAST *answers*

1. Harold Brown 1960-61. Roger Batzel 1971-1988.
2. 271.
3. William Wagoner. He was a local rancher with strong family ties to the Livermore valley.
4. About 75.
5. Detonation by the Russians of their first atomic bomb in 1949.
6. Livermore Advanced Research Computer.
7. Two answers: the old Bldg. 162 where building 111 now stands, also current building number 316.
8. Dr. Sterling Colgate, heir to the Colgate fortune. His research idea was the "Levitron" which was supposed to be a ring floating in a vacuum.
9. Queen Frederika of Greece in 1958.
10. Bldg. 194.
11. Their lights blinked in synchronism with the rep-rate of the machine. PG&E got a lot of calls and soon we had a better power source for the Laboratory.
12. Trudell's.
13. The original name for the bus service that circled the Laboratory every 30 minutes.
14. The original owner of the building was the Sunshine Greeting Card Co.
15. George H. Bush.
16. Dr. John Foster.
17. Lady Bird Johnson. She suggested we improve the landscaping.
18. Originally the southern end of Vasco Road was at Highway 50, now 580. From East Avenue to the railroad tracks the road was called Taylor. In 1958 the two were connected and Taylor was renamed to Vasco. This change was made to cut down on the commuter traffic in downtown Livermore.
19. It was used as a water training facility for downed pilots.
20. California Research & Development. Managed by Standard Oil. The Laboratory took over their operations in September 1952.
21. 1955.
22. Rainier.
23. Wally Reynolds.
24. 750 feet.
25. Luis Pauling.
26. Cecilia Larsen.
27. Nelson Rockefeller.
28. Corsair.
29. Gymnasium.
30. Near Rifle, CO. The test was named Rio Blanco; it was used for gas well simulation in 1973.
31. Spartan ABM, the event was called Cannikin and was done on Aniakchak Island
32. Hetch Hetchy in Yosemite National Park.
33. A Beachcraft Bonanza, later a Douglas DC3 and then a Fairchild F27.
34. Ernest Orlando Lawrence
35. Nuclear excavation.
36. 24 years old.
37. 1958, when Ernest Lawrence passed away. 1971. 1979.
38. HIlltop 7-1100.
39. Zero.
40. Project Sherwood.
41. UNIVAC I.
42. Ansel Adams. He took photos of the MFTF magnets.
43. Bldg. 415 third floor was used as the control tower for the Livermore Naval Air Station.
44. Desert Rock Airstrip where flights from Livermore landed.
45. Herbert York at 32 years old.
46. Ham radios were set up and phone patches were used to call home.
47. Possibly two correct answers. Building 113 had to be retrofitted with outside steel support columns. Building 311 had to be almost totally rebuilt.
48. 1975.
49. x27333.
50. 1957.

Technical Meeting Calendar

Friday 21

ENERGY & ENVIRONMENT
"High-Resolution Simulations of Present and Future Climate," by Phil Duffy, LLNL. 10:30 a.m., Bldg. 170, room 1091. Contact: Camille Vandermeer, 3-2672. Refreshments will be served.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH
"OpenMP: A Status Report and Look to the Future," by Tim Mattson, Intel Corporation. 9:30 a.m., Bldg. 451, room 1025 (property protection area). Contacts: Bronis de Supinski (CASC) 2-1062, or Leslie Bills 3-8927.

Monday 24

SAFETY, SECURITY & ENVIRONMENTAL PROTECTION (SSEP)
"Then and Now" week
As part of the Lab's 50th Anniversary celebration, the Safety, Security & Environmental protection directorate is hosting a panel discussion with former SSEP leaders and led by Associate Director Den Fisher. 10:30 a.m.-noon, Bldg. 543. Contact: Manny Lateiner, 3-6398.

Tuesday 25

PHYSICS & ADVANCED TECHNOLOGIES
"Probing Matter Created in Relativistic Heavy Ion Collisions," by Gerd J. Kunde, Yale University. 10 a.m., Bldg. 211, room 227 (badge required). Contacts: Ron Soltz, 3-2647 or Pat Smith, 2-0920.

JUNE 24-26
DEFENSE & NUCLEAR TECHNOLOGIES
As part of the Lab's 50th anniversary celebration, Defense & Nuclear Technologies is hosting a three-day meeting, Monday through Wednesday, entitled, "Technical Innovation in Weapons Research." Presentations will focus on technical achievements, along with global, political implications and military applications. All DNT staff and supporting program staff with SP access are invited to attend. Talks will last approximately 45 minutes and audience participation is encouraged. Presentations are organized in six half-day sessions, and they will focus on: the Polaris System; missile defense; tactical weapons; advanced weapon concepts; stockpile stewardship; and related panel discussions. Contact: Jennifer Petersen, 4-3160, or petersen7@llnl.gov for further information, including times and meeting location.

Wednesday 26

RADIATION DETECTION CENTER
"Neutron Detectors Based Upon Nuclear-Optical Conversion in Gas Media," by S.P.Melnikov, All-Russia Scientific Research Institute of Experimental Physics (VNIIEF). 10 a.m., Bldg. 543, room 1244 (uncleared area). Contacts: Christie Shannon, 3-6683 or Gary Johnson, 3-8834.

Thursday 27

PHYSICS & ADVANCED TECHNOLOGIES
"Complex Interferometry - Passed, Present and Future," "PALS, Laser Imprint and Foam Targets," by Milan Kalal. 2 p.m., Bldg. 219, room 163. Refreshments will be served. Contacts: Kevin Fournier, 3-6129 or Eryn Davis, 2-0475.

Friday 28

PHYSICS & ADVANCED TECHNOLOGIES
"Internal Dynamics of Dwarf Elliptical Galaxies," by Marla Geha, UC Santa Cruz. Noon, Bldg. 319, room 205 (badge required). Refreshments will be served. Contact: Adam Stanford, 3-6013, or Sandra Maldonado, 3-0621.

CHEMISTRY & MATERIALS SCIENCE
"Synthesis and Formulation of Energetic Materials," by Phil Pagoria, LLNL. Noon, Bldg. 151, room 1209 (uncleared area). Contact: Tony Esposito, 4-3497, or Linda Jones, 3-8839.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Focusing the spotlight on new adaptive optics building

By Anne M. Stark

NEWSLINE STAFF WRITER

Lab researchers, who are key partners in the University of California Santa Cruz-based Center for Adaptive Optics (CfAO), are participating today in the dedication of a new building for the Center.

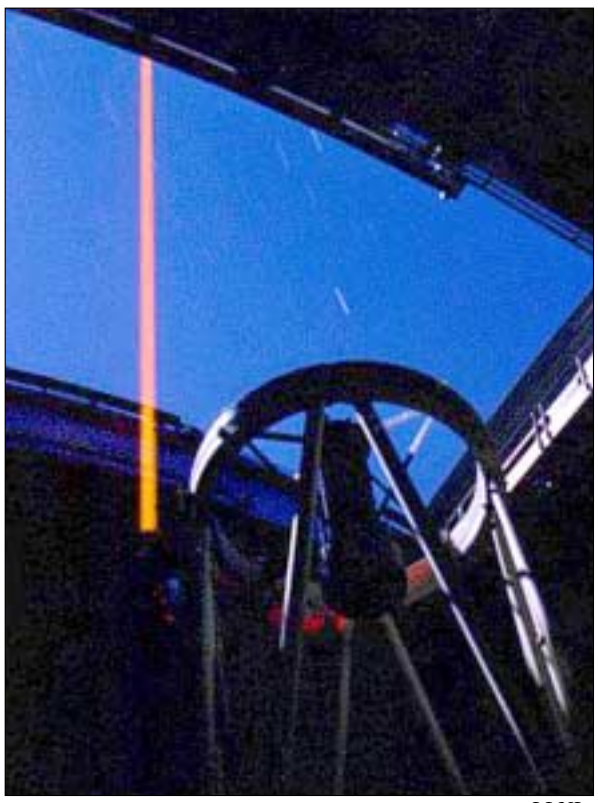
National Science Foundation Director Rita Colwell is scheduled to speak this afternoon as part of the dedication ceremony.

The 4-year-old CfAO is a National Science Foundation Science and Technology Center and is made up of 25 participating institutions including universities, national laboratories and private businesses. The dedication will be at 1:30 p.m. at Science Hill at the UC Santa Cruz campus.

Several LLNL scientists are founding members of the CfAO. The Lab plays a key role in several fields of adaptive optics, including astronomy and vision science.

"Though we've been operational for close to four years, this dedication means so much to all the institutions involved in this field of science," said Claire Max, associate director of CfAO and an astrophysicist with LLNL's Institute of Geophysics and Planetary Physics. "Adaptive optics is already providing us with a much clearer view of the universe and of the human eye, and many other exciting applications await us."

In astronomy, adaptive optics is being used at the W.M. Keck Observatory in Hawaii to enable astronomers to minimize the blurring effects of the Earth's atmosphere, producing images with unprecedented detail and resolution. The adaptive optics system uses light from a relatively bright star, or guide star, to measure the atmospheric distortions and to correct for them, but only about 1 percent of the sky contains stars sufficiently bright to be of use. A laser built by LLNL is currently being commissioned at Keck that will allow adaptive optics to be used nearly anywhere in the sky by producing an artificial laser guide star. The Keck virtual guide star is expected to be operational later this year.



LLNL

The laser guide star at the Lick Observatory uses adaptive optics to improve astronomical images.

The only laser guide star in the world that is currently being used for astronomy is at Lick Observatory, and was built by LLNL. It is operated by Lick staff, and is the only laser guide star today with operational adaptive optics which make improved astronomical images.

In vision science, Scot Olivier, LLNL group leader for adaptive optics in I Division, is directing a team of researchers developing adaptive optics to study the human eye and to help in the early detection of eye disease. This new generation of prototype clinical adaptive optics systems is based on compact MEMS (micro-electrical mechanical systems) technology being developed at LLNL in partnership with industry and academia.

These new systems will be used to study the limits of human visual acuity to guide improvements in contact lenses and laser refractive surgery to correct for aberrations in the eye that cannot be corrected with conventional eye glasses. In addition, these systems will be used to detect retinal disease at an earlier stage, to allow an ophthalmologist to treat the disease before it affects a person's vision. Other LLNL researchers are developing a retinal prosthesis for those patients whose vision has been impaired by eye disease.

To play it SAFE on foreign travel, 'think like counterintelligence'

In an era that has seen foreign travel become increasingly common, Lab employees need to be well-prepared to visit foreign countries. To help them in this matter, the Security Awareness For Employees (SAFE) program sponsored a talk entitled "Vulnerabilities of the Foreign Traveler."

The talk was given by Connie Allen, an employee of the Centre for Counterintelligence and Security Studies in Alexandria, Va. Before joining the Centre, Allen had a distinguished 24-year career in the U.S. Army, 20 of those years in counterintelligence. She served as a senior instructor at the U.S. Army Advanced Counterintelligence Training Center and is a graduate of the FBI National Academy.

"Counterintelligence (CI) is conducted by every country around the world," Allen said in introducing the topic. "To protect yourself, you need to think like counterintelligence does."

Allen encouraged employees to consider a variety of threats when traveling abroad.

"Common criminals, terrorists, government officials, and counterintelligence services can all pose a threat," she said. "Someone stealing your briefcase to sell on the street can be as much of a security risk as a CI officer eliciting information from you."

The talk focused specifically on how Lab employees can identify CI officers or services at work and protect themselves from security breaches.

"You need to consider yourself a target, even if you don't have the highest security clearance or work on the top secret project," Allen said. "The target is you, and your friends, colleagues. Your work may be used to get information from you."

The mission of a CI service, according to Allen, is to identify, penetrate, and neutralize threats to a nation's way of life.

"As a federal employee, you may be seen as a threat, and the CI service's goal is to counter threats," she said. She continued by noting, "Foreign CI may try to recruit you or catch you once you have been identified as a target."

To protect against being viewed as a target, Allen offered one of the few rules in the CI business. "You have to be perfect all the time in your professional and personal lives," she said. This means, don't behave away from home differently than you do when you are with your family members or colleagues. And you can't go overseas expecting to take on foreign CI by yourself — you need to rely on your employer for help, too.

After discussing methods of surveillance and several means of eliciting information from people, Allen concluded her talk with a number of tips for foreign travelers.

"When you travel to another country, you need to know your job there. Don't exceed it," she said. "Don't be paranoid, but be prepared. Be vigilant — that will help ensure your safety and security."

For more information about traveling abroad as a Lab employee, check out the SAFE Web site at http://www-r.llnl.gov/safe/.

Emergency preparedness is the key to safety at home and on the job

Are you prepared for an emergency? Do you know what to do if there is one at work? Have you prepared a plan for dealing with an emergency at home? If you do have a plan, do you and your family practice it regularly?

Those are the kinds of questions the National Safety Council has been asking Americans to consider the past few days as it puts the focus on emergency preparedness during this, the third week of National Safety Month.

Early notification is a critical element in the Laboratory's emergency response program.

As the Lab's emergency preparedness trainers note in an online training class, "The faster authorities are notified, the faster an emergency alert can be sounded. And the faster that's done, the less time workers will be exposed to the emergency or the more quickly workers can be removed from potential harm."

Trainers stress that when Laboratory employees encounter an emergency or potential emergency at work they should report it immediately by calling 911 from any wired Lab phone or (925) 447-6880 if using a cell phone.

When alerted to an emergency — either by public address system, telephone, pager or personal notification — listen closely and follow directions exactly. Comply with instructions given by emergency response personnel summoned to the scene.

Addressing the issue of preparedness, the National Safety Council advises: "At work, every second counts when it comes to an emergency. You train and practice in order to know how to protect yourself and minimize property loss. So why not take advantage of this training that you have received at work and apply it at home?"

Here are some Council tips to help you prepare for an emergency at home:

• Develop and practice a home emergency plan that attempts to cover all situations.

• Make smoke, gas and carbon monoxide detectors a part of your preparedness at home. Routinely replace batteries so the detectors will function if needed.

• Have an escape route that includes at least two ways out of your home. Install a safety ladder that can be used if a window is the second way out of a two-story home.

• Designate a place where family members and guests in your home can meet after they have evacuated your residence.

• Educate each family member in how to summon help.

• Encourage family members to take first aid and CPR classes.

• Maintain a well-stocked first-aid kit in an accessible area. Keep flashlights, radios, batteries and other emergency supplies (such as blankets and drinking water) located in a central area known to all family members.

Remember, while you cannot predict when an emergency will occur, you can prepare yourself to handle one.

June is National Safety Month

ISM

DIRECTORS OFFICE

Continued from page 1

workweek: or a five-day flexible 5/40 work schedule — the hours scheduled per day can be more or less than eight; as well as "alternate" work schedules — like 9/80s, 4/10s, and even telecommuting. This is what the Lab's new policies provide. They also clarify the availability of temporary schedule changes. The Lab's Payroll, Effort Reporting, and LITE systems are being reprogrammed this summer to enable flexibility for biweekly-paid employees whom we haven't been able to provide for before. All of these changes will enhance the tools managers and supervisors can use to help employees better balance work and life.

There are many advantages to organizations using the whole range of scheduling options the Lab will offer. Doing so can increase coverage by extending hours of operation and promote cross-training for employees who may be covering for others. It's also a great recruitment and retention tool. Work actually increases during quieter non-peak hours.

Each directorate will be developing local guidance on which schedules can be offered and who will have the authority to approve them. Our goal is to support employees' work/life needs. A manager's decision on whether a particular employee can be approved for an alternative work schedule, such as a 4/10 or a 9/80, will likely depend on such things as the nature of the assignment, work group preferences and the ability to maintain productivity and meet business commitments.

Instituting flexible work schedules will be easier if managers make expectations and criteria for success clear before the new schedules begin. In some cases, piloting alternate work schedules for a six-month period may provide an opportunity to fine tune criteria and processes, and help organizations decide whether approvals can be long term, for a fixed term, or dependent on the job assignment. If alternate or flexible work schedules cannot be accommodated in a particular organization, managers should clearly communicate why to employees.

I think the biggest obstacle we face in successfully implementing these changes is educating the Laboratory community about the new policy provisions. As the Associate Director for the Administration and Human Resources Directorate, I am committed to making sure managers and employees know what is available under the new policies and help them understand how to use them to enhance work/life balance while meeting organizational needs. That's why I have asked our Human Resources specialists to provide briefings for managers, supervisors and administrators this week and next, and to be available to help directorates evaluate which flexible work options will best meet their needs. A new Flexible Work Options web site has also been launched this week and *Newsline* will run Qs and As for employees throughout the summer.

If you would like to learn more about the Lab's new Flexible Work Options, see the Questions and Answers on this page and visit our new Web site at http://www-r.llnl.gov/fwo.

Answering your work schedule questions

Q. What flexible work options will be offered under the new policies?

Effective Oct. 1, these will include standard Laboratory work schedules, flexible work schedules, alternate work schedules (4/10s, 9/80s), temporary schedule changes, flextime, telecommuting, and occasional reschedules.

Q. What is a standard Laboratory work schedule?

A standard Laboratory work schedule for full-time employees is 40 hours worked over five of the seven days in a calendar week (usually Monday through Friday), eight hours per day, not including a meal period. Part-time employees work the number of eight-hour days each workweek or the number of hours each workday that correspond to the employment percentage. The cognizant associate director and/or department head/division leader or designee approves this schedule.

Q. What does cognizant mean in this context?

"Cognizant" means the person with responsibility to ensure that directorate, department or division work requirements are met. In the case of a matrix employee, this is the program organization; however, the program organization works in partnership with the appropriate management level in the employee's home directorate in approving the employee's work schedule.

Q. What are flexible work schedules?

Flexible work schedules for full-time employees are called flexible 5/40 work schedules. Employees on this schedule work 40 hours over a minimum of five of the seven days in a calendar week. The number of hours scheduled per workday may be more or less than eight. Part-time employees work the number of hours corresponding to their employment percentage over the five-day period. The cognizant associate director and/or department head/division leader or designee approves this schedule.

Q. What are alternate work schedules?

Alternate work schedules are 4/10s and 9/80s. Beginning in October, full-time employees who do not work shifts can be approved by the AD or designee for 4/10s (four 10-hour days, not including a meal period, worked in a Sunday through Saturday calendar week), and 9/80s (80 hours worked over two calendar weeks as nine-hours per day Monday – Thursday and eight hours on Friday one calendar week — 44 hours, and nine-hours per day Monday – Thursday and Friday off the next — 36 hours). Approvals are for six-month periods beginning each October and April. A new Friday-to-Friday workweek will be established for biweekly-paid employees so that 40 hours are worked in each workweek. This will keep UCRS service credit and vacation and sick leave accruals at 100 percent for the 36-hour calendar week and avoid unnecessary premium overtime charges for the calendar week in which 44 hours are worked.

Q. What is the deadline to approval alternate work schedules for an October start?

Approvals must reach Payroll no later than Sept. 20.

Q. What is flextime?

Flextime is flexibility in the start and stop times of both full-time and part-time employees' assigned daily work schedules around established business hours. The cognizant department head/division leader or designee approves flextime.

Q. What is a temporary schedule change?

The temporary schedule change enables the cognizant supervisor and/or department head/division leader to effect a temporary change in the employee's assigned daily start/stop times, assigned work days, or, for some work schedules, assigned days off. It is used to meet business and/or staffing needs, for example during a holiday week. It can also be used to address an employee's temporary work/life needs.

Q. Which employees can be approved for telecommuting?

The department head/division leader can approve monthly-paid employees for telecommuting on an intermittent or ad hoc basis, but regular (ongoing) part-time or full-time telecommuting can be approved only by the associate director and only if certain conditions are met and written down in the form of the Laboratory work-at-home agreement. Biweekly-paid employees can be approved for occasional ad hoc or intermittent telecommuting only. The Laboratory's normal overtime pay policies apply to work at home by biweekly-paid employees.

Q. What is an occasional reschedule for limited-time employees?

An occasional reschedule can be requested by a biweekly-paid employee so that the employee can make up an absence of up to one-half day during the same workweek instead of charging the absence to accrued or unpaid leave. The cognizant supervisor must approve occasional reschedules in advance. Biweekly-paid employees on 4/10s or 9/80s can also request an occasional reschedule during holiday weeks to enable them to make up during the same workweek any difference between work hours normally scheduled for the day (10 hours for 4/10s, nine hours for 9/80s) and pay for the holiday, which is limited to eight hours. While similar in concept to the temporary schedule change, the occasional reschedule is used to accommodate an employee who would otherwise need to charge leave to achieve the hours of their weekly schedule.

ENVIRONMENT

Continued from page 1

vidual projects have also been analyzed in accordance with federal and state requirements prior to getting started.

"The NNSA wanted to update the EIS to improve planning for allocation of future projects at the Lab," EIS document manager Tom Grim said. "We also hope to use the EIS as a means of improving public understanding of the environmental impact that the Lab has and may have in the future."

Since this EIS is sitewide, every current project will be examined for its environmental impact. These include air and water quality, geology, hazards analysis and waste management, among others.

"Every possible environmental impact shows up in this report," Grim said. "A classified project isn't detailed, but its environmental impact is."

In accordance with federal regulations, the DOE placed a notice of intent to prepare the EIS in the Federal Register on June 17. The public scoping period — an opportunity for members of the local community to have input into the process – will run from June 17 until Aug. 13.

"We really want to encourage a full range of public comments," Grim said of the public scoping period. "That's why we have set up several meetings where community members can speak about their concerns in this matter. And we have almost doubled the required time for public scoping comments."

Two community meetings will be held on July 10 in Livermore at the Doubletree Club. Two more meetings will be held on July 11 at the Holiday Inn Express in Tracy.

"We will take all the public comments into consideration," Grim said. "We keep a complete log of comments, and they go on record in the final draft of the statement.

"What we're really doing is studying the options for assigning work to the Lab in the future. The site-wide Environmental Impact Statement simply serves as a framework for the DOE to assess the environmental impact of a future project."

For more information about the site-wide EIS, contact Tom Grim at 2-0704 or by email at tom.grim@oak.doe.gov.

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